IN THE CLAIMS:

All of the pending claims 1-16 are set forth below. The status of each claim is indicated as (original).

1. (original) A layout modeling system for a transport system to transport articles from a starting position to a plurality of target positions along a transport route, comprising:

a plurality of nodes having location information to respectively correspond to the starting position and the target positions at which the articles are transported; and

a plurality of links to connect the respective nodes along the respective transport route and having route information to correspond to respective routes between the respective nodes,

the route information of each link of the plurality of links being updated in real time.

2. (original) The layout modeling system for a transport system according to claim 1, wherein the route information of each link comprises:

a distance and rotation angle between the respective nodes connected by the respective link; and

speed and an occupation ratio of transport vehicles traveling on the transport route between the respective nodes.

3. (original) The layout modeling system for a transport system according to claim 2, wherein at least one of the starting position and the plurality of target positions comprises:

a storehouse of the articles, and the nodes are provided to respectively correspond to ports provided in the storehouse and to allow articles to be transported thereto or therefrom;

shelves on which the articles are loaded; and

a transporting unit to load and unload the articles on the respective shelf.

4. (original) The layout modeling system for a transport system according to claim 3, wherein the route information of the links to connect the nodes provided in the storehouse further comprises:

an amount of articles stocked in the storehouse.

5. (original) The layout modeling system for a transport system according to claim 3, wherein the route information of the links comprises:

errors generated between the nodes which is updated based on real time circumstances.

6. (original) The layout modeling system for a transport system according to claim 2, wherein the route information on the distance indicates a transport distance to correspond to the respective routes between the respective nodes.

7. (original) The layout modeling system for a transport system according to claim 2, wherein the route information on the rotation angle indicates an angle in which the transport vehicles rotate during travel in an instance in which the transport route is curved.

8. (original) The layout modeling system for a transport system according to claim 2, wherein the route information on the speed indicates speeds of the transport vehicles traveling between the nodes.

9. (original) The layout modeling system for a transport system according to claim 2, wherein the route information on the occupation ratio indicates a number of the transport vehicles between the nodes.

10. (original) The layout modeling system for a transport system according to claim 5, wherein the route information on the errors indicate unexpected accidents occurring between the nodes, and poor operations and breakdowns caused by accident occurring at respective ports corresponding to the respective nodes.

11. (original) The layout modeling system for a transport system according to claim 5, wherein the route information on the errors indicated unexpected accidents occurring at a respective storehouse or a processing equipment location.

12. (original) A method of selecting an optimum transport route to transport articles from a starting position to a plurality of target positions along a transport route, the method comprising:

providing a plurality of nodes having location information to respectively correspond to the starting position and the target positions at which the articles are transported;

providing a plurality of links to connect the respective nodes along the respective transport route and having route information to correspond to respective routes between the respective nodes;

searching the route information of the respective links connected via the respective node corresponding to the starting position; and

selecting the transport route which allows articles to be transported from the starting position to a designated target position the fastest as the optimum transport route.

13. (original) The method according to claim 12, wherein the route information of the plurality of links is updated in real time.

14. (original) The method according to claim 12, wherein the route information of the links comprises:

a distance and rotation angle between the respective nodes connected by the respective link;

speed and an occupation ratio of transport vehicles traveling on the transport route between the respective nodes;

errors generated between the nodes which is updated based on real time circumstances; and

an amount of articles stocked in a storehouse of at least one of the starting position and the target positions.

15. (original) A method of selecting an optimum transport route to transport articles from a starting position to a plurality of target positions along a transport route, the method comprising:

providing a plurality of nodes having location information to respectively correspond to the starting position and the target positions at which the articles are transported;

providing a plurality of links to connect the respective nodes along the respective transport route and having route information to correspond to respective routes between the respective nodes;

updating and reflecting the route information of the links in real time when the articles are transported;

searching the route information of the respective links connected via the respective node corresponding to the starting position; and

selecting the transport route which allows articles to be transported from the starting position to a designated target position the fastest as the optimum transport route.

16. (original) A layout modeling system for a transport system to transport articles from a starting position to a plurality of target positions along a transport route, comprising:

a plurality of nodes having location information to respectively correspond to the starting position and the target positions at which the articles are transported;

a plurality of links to connect the respective nodes along the respective transport route and having route information to correspond to respective routes between the respective nodes,

a searching unit to search the route information of the respective links connected via the respective node corresponding to the starting position; and

a selecting unit to select the transport route which allows articles to be transported from the starting position to a designated target position the fastest as the optimum transport route.